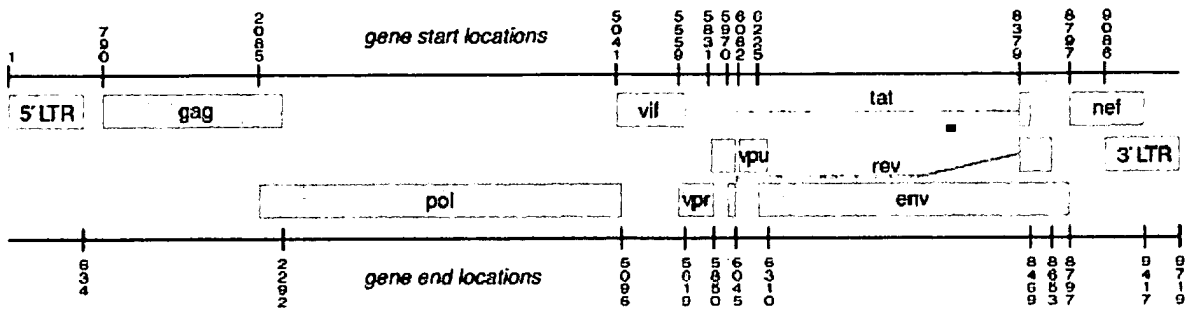


Epilign result

Your query sequence location is shown as a red bar in map between reading frames 1 and 2.



Query:

AAGSTMGAASMTLTVQARQ

Query Length: 19

HXB2 Location: Env: 525 → 543 (gp41: 14 → gp41: 32)

Alignment: Env, 979 sequences

[Summarize All](#)

[Summarize By Subtype](#)

Alignment Results

[Databases](#) [Search](#) [Tools](#) [Products](#) [Publications](#)

Search Antibody Database

Found 4 matching records:

Displaying record number 738

MAb_ID 5F3
HXB2_Location gp160(525-543) [gp160_Epitope_Map](#)
Author_Location gp41(526-543 BH10)
Research_Contact H. Katinger, Inst. Appl. Microbiol., Vienna, Austria
Epitope AAGSTMGAASMTLTVQARQ [Epitope_Alignment](#)
Ab_Type
Neutralizing no
Species (Isotype) human(IgG1κ)
Immunogen HIV-1 infection
Keywords

Notes

- 5F3: This epitope is similar to a fragment of the HLA class II histocompatibility antigen, GGSCMAALTVTLTV. [Maksiutov2002](#)
- 5F3: Human MAb generated by electrofusion of PBL from HIV-1+ volunteers with CB-F7 cells. [Buchacher1994](#)

References

Buchacher1994 A. Buchacher, R. Predl, K. Strutzenberger, W. Steinfellner, A. Trkola, M. Purtscher, G. Gruber, C. Tauer, F. Steindl, A. Jungbauer, and H. Katinger. Generation of human monoclonal antibodies against HIV-1 proteins; electrofusion and Epstein-Barr virus transformation for peripheral blood lymphocyte immortalization. *AIDS Res. Hum. Retroviruses*, 10:359-369, 1994. A panel of 33 human monoclonal antibodies were produced. Linear epitopes for some of this set of MAbs were mapped using peptide ELISA. Linear epitopes were mapped in gp41, and a single epitope was mapped in p24. While multiple gp120 specific MAbs were generated, all seemed to be conformational or carbohydrate dependent, or both. PubMed ID: 7520721. [Show_all_entries_for_this_paper.](#)

Maksiutov2002 A. Z. Maksiutov, A. G. Bachinskii, and S. I. Bazhan. [Searching for Local Similarities Between HIV-1 and Human Proteins. Application to Vaccines]. *Mol Biol (Mosk)*, 36(3):447-459, May-Jun 2002. Article in Russian. PubMed ID: 12068630. [Show_all_entries_for_this_paper.](#)

Displaying record number 739

MAb_ID 25C2 (IAM 41-25C2)
HXB2_Location gp160(525-543) [gp160_Epitope_Map](#)
Author_Location gp41(526-543 BH10)

Research Contact H. Katinger, Inst. Appl. Microbiol., Vienna, Austria and Viral Testing Systems, Houston, TX

Epitope AAGSTMGAASMTLTVQARQ

Epitope Alignment

Ab Type

Neutralizing no

Species (Isotype) human(IgG1κ)

Immunogen HIV-1 infection

Keywords

Notes

- 25C2: This epitope is similar to a fragment of the HLA class II histocompatibility antigen, GGSCMAALTVTLTV. [Maksiutov2002](#)
- 25C2: Called IAM 41-25C2 -- Binding domain overlaps sites that are critical for gp120-gp41 association -- binding is enhanced by sCD4 -- binding region defined as: gp41(21-38 BH10). [Sattentau1995](#)
- 25C2: Human MAb generated by electrofusion of PBL from HIV-1+ volunteers with CB-F7 cells -- binds oligomeric and monomeric gp41, and gp160. [Buchacher1994](#)

References

Buchacher1992 A. Buchacher, R. Predl, C. Tauer, M. Purtscher, G. Gruber, R. Heider, F. Steindl, A. Trkola, A. Jungbauer, and H. Katinger. Human monoclonal antibodies against gp41 and gp120 as potential agents for passive immunization. *Vaccines*, 92:191-195, 1992. [Show all entries for this paper.](#)

Buchacher1994 A. Buchacher, R. Predl, K. Strutzenberger, W. Steinfellner, A. Trkola, M. Purtscher, G. Gruber, C. Tauer, F. Steindl, A. Jungbauer, and H. Katinger. Generation of human monoclonal antibodies against HIV-1 proteins; electrofusion and Epstein-Barr virus transformation for peripheral blood lymphocyte immortalization. *AIDS Res. Hum. Retroviruses*, 10:359-369, 1994. A panel of 33 human monoclonal antibodies were produced. Linear epitopes for some of this set of MAbs were mapped using peptide ELISA. Linear epitopes were mapped in gp41, and a single epitope was mapped in p24. While multiple gp120 specific MAbs were generated, all seemed to be conformational or carbohydrate dependent, or both. PubMed ID: 7520721. [Show all entries for this paper.](#)

Sattentau1995 Q. J. Sattentau, S. Zolla-Pazner, and P. Poignard. Epitope exposure on functional, oligomeric HIV-1 gp41 molecules. *Virology*, 206:713-717, 1995. Most gp41 epitopes are masked when associated with gp120 on the cell surface. Weak binding of anti-gp41 MAbs can be enhanced by treatment with sCD4. Mab 2F5 binds to a membrane proximal epitope which binds in the presence of gp120 without sCD4. PubMed ID: 7530400. [Show all entries for this paper.](#)

Maksiutov2002 A. Z. Maksiutov, A. G. Bachinskii, and S. I. Bazhan. [Searching for Local Similarities Between HIV-1 and Human Proteins. Application to Vaccines]. *Mol Biol (Mosk)*, 36(3):447-459, May-Jun 2002. Article in Russian. PubMed ID: 12068630. [Show all entries for this paper.](#)

Displaying record number 740

MAb ID 24G3

HXB2 Location gp160(525-543)

gp160_Epitope_Map

Author Location gp41(526-543 BH10)

Research Contact H. Katinger, Inst. Appl. Microbiol., Vienna, Austria

Epitope AAGSTMGAASMTLTVQARQ

Epitope Alignment

Ab Type

Neutralizing no

Species (Isotype) human(IgG1κ)

Immunogen HIV-1 infection

Keywords

Notes

- 24G3: This epitope is similar to a fragment of the HLA class II histocompatibility antigen, GGSCMAALTVTLTV. [Maksiutov2002](#)
- 24G3: Human MAb generated by electrofusion of PBL from HIV-1+ volunteers with CB-F7 cells. [Buchacher1994](#)

References

Buchacher1992 A. Buchacher, R. Predl, C. Tauer, M. Purtscher, G. Gruber, R. Heider, F. Steindl, A. Trkola, A. Jungbauer, and H. Katinger. Human monoclonal antibodies against gp41 and gp120 as potential agents for passive immunization. *Vaccines*, 92:191-195, 1992. [Show all entries for this paper.](#)

Buchacher1994 A. Buchacher, R. Predl, K. Strutzenberger, W. Steinfellner, A. Trkola, M. Purtscher, G. Gruber, C. Tauer, F. Steindl, A. Jungbauer, and H. Katinger. Generation of human monoclonal antibodies against HIV-1 proteins; electrofusion and Epstein-Barr virus transformation for peripheral blood lymphocyte immortalization. *AIDS Res. Hum. Retroviruses*, 10:359-369, 1994. A panel of 33 human monoclonal antibodies were produced. Linear epitopes for some of this set of MAbs were mapped using peptide ELISA. Linear epitopes were mapped in gp41, and a single epitope was mapped in p24. While multiple gp120 specific MAbs were generated, all seemed to be conformational or carbohydrate dependent, or both. PubMed ID: [7520721](#). [Show all entries for this paper.](#)

Maksiutov2002 A. Z. Maksutov, A. G. Bachinskii, and S. I. Bazhan. [Searching for Local Similarities Between HIV-1 and Human Proteins. Application to Vaccines]. *Mol Biol (Mosk)*, 36(3):447-459, May-Jun 2002. Article in Russian. PubMed ID: [12068630](#). [Show all entries for this paper.](#)

Displaying record number 741

MAb ID 1A1

HXB2 Location gp160(525-543)

[gp160 Epitope Map](#)

Author Location gp41(526-543 BH10)

Research Contact H. Katinger, Inst. Appl. Microbiol., Vienna, Austria

Epitope AAGSTMGAASMTLTVQARQ

[Epitope Alignment](#)

Ab Type

Neutralizing no

Species (Isotype) human(IgG1κ)

Immunogen HIV-1 infection

Keywords

Notes

- 1A1: This epitope is similar to a fragment of the HLA class II histocompatibility antigen, GGSCMAALTVTLTV. [Maksiutov2002](#)
- 1A1: Human MAb generated using EBV transformation of PBL from HIV-1+ volunteers. [Buchacher1994](#)

References

Buchacher1994 A. Buchacher, R. Predl, K. Strutzenberger, W. Steinfellner, A. Trkola, M. Purtscher, G. Gruber, C. Tauer, F.

Steindl, A. Jungbauer, and H. Katinger. Generation of human monoclonal antibodies against HIV-1 proteins; electrofusion and Epstein-Barr virus transformation for peripheral blood lymphocyte immortalization. *AIDS Res. Hum. Retroviruses*, 10:359-369, 1994. A panel of 33 human monoclonal antibodies were produced. Linear epitopes for some of this set of MABs were mapped using peptide ELISA. Linear epitopes were mapped in gp41, and a single epitope was mapped in p24. While multiple gp120 specific MABs were generated, all seemed to be conformational or carbohydrate dependent, or both. PubMed ID: 7520721. [Show all entries for this paper.](#)

Maksiutov2002 A. Z. Maksutov, A. G. Bachinskii, and S. I. Bazhan. [Searching for Local Similarities Between HIV-1 and Human Proteins. Application to Vaccines]. *Mol Biol (Mosk)*, 36(3):447-459, May-Jun 2002. Article in Russian. PubMed ID: 12068630. [Show all entries for this paper.](#)

Questions or comments? Contact us at immuno@lanl.gov

Operated by Los Alamos National Security, LLC, for the U.S. Department of Energy's National Nuclear Security Administration
Copyright © 2005-2006 LANS LLC All rights reserved | [Disclaimer/Privacy](#)



Databases Search Tools Products Publications

 Search Site

Search Antibody Database

Found 4 matching records:

Displaying record number 738

MAB_ID 5F3
HXB2_Location gp160(525-543) [gp160_Epitope_Map](#)
Author_Location gp41(526-543 BH10)
Research_Contact H. Katinger, Inst. Appl. Microbiol., Vienna, Austria
Epitope AAGSTMGAASMTLTVQARQ [Epitope_Alignment](#)
Ab_Type
Neutralizing no
Species (Isotype) human(IgG1κ)
Immunogen HIV-1 infection
Keywords

Notes

- 5F3: This epitope is similar to a fragment of the HLA class II histocompatibility antigen, GGSCMAALTVTLTV. [Maksiutov2002](#)
- 5F3: Human MAb generated by electrofusion of PBL from HIV-1+ volunteers with CB-F7 cells. [Buchacher1994](#)

References

Buchacher1994 A. Buchacher, R. Predl, K. Strutzenberger, W. Steinfellner, A. Trkola, M. Purtscher, G. Gruber, C. Tauer, F. Steindl, A. Jungbauer, and H. Katinger. Generation of human monoclonal antibodies against HIV-1 proteins; electrofusion and Epstein-Barr virus transformation for peripheral blood lymphocyte immortalization. *AIDS Res. Hum. Retroviruses*, 10:359-369, 1994. A panel of 33 human monoclonal antibodies were produced. Linear epitopes for some of this set of MAbs were mapped using peptide ELISA. Linear epitopes were mapped in gp41, and a single epitope was mapped in p24. While multiple gp120 specific MAbs were generated, all seemed to be conformational or carbohydrate dependent, or both. PubMed ID: 7520721. [Show_all_entries_for_this_paper.](#)

Maksiutov2002 A. Z. Maksiutov, A. G. Bachinskii, and S. I. Bazhan. [Searching for Local Similarities Between HIV-1 and Human Proteins. Application to Vaccines]. *Mol Biol (Mosk)*, 36(3):447-459, May-Jun 2002. Article in Russian. PubMed ID: 12068630. [Show_all_entries_for_this_paper.](#)

Displaying record number 739

MAB_ID 25C2 (IAM 41-25C2)
HXB2_Location gp160(525-543) [gp160_Epitope_Map](#)
Author_Location gp41(526-543 BH10)

Research Contact H. Katinger, Inst. Appl. Microbiol., Vienna, Austria and Viral Testing Systems, Houston, TX

Epitope AAGSTMGAASMTLTVQARQ

Epitope Alignment

Ab Type

Neutralizing no

Species (Isotype) human(IgG1κ)

Immunogen HIV-1 infection

Keywords

Notes

- 25C2: This epitope is similar to a fragment of the HLA class II histocompatibility antigen, GGSCMAALTVTLTV. [Maksiutov2002](#)
- 25C2: Called IAM 41-25C2 -- Binding domain overlaps sites that are critical for gp120-gp41 association -- binding is enhanced by sCD4 -- binding region defined as: gp41(21-38 BH10). [Sattentau1995](#)
- 25C2: Human MAb generated by electrofusion of PBL from HIV-1+ volunteers with CB-F7 cells -- binds oligomeric and monomeric gp41, and gp160. [Buchacher1994](#)

References

Buchacher1992 A. Buchacher, R. Predl, C. Tauer, M. Purtscher, G. Gruber, R. Heider, F. Steindl, A. Trkola, A. Jungbauer, and H. Katinger. Human monoclonal antibodies against gp41 and gp120 as potential agents for passive immunization. *Vaccines*, 92:191-195, 1992. [Show all entries for this paper.](#)

Buchacher1994 A. Buchacher, R. Predl, K. Strutzenberger, W. Steinfellner, A. Trkola, M. Purtscher, G. Gruber, C. Tauer, F. Steindl, A. Jungbauer, and H. Katinger. Generation of human monoclonal antibodies against HIV-1 proteins; electrofusion and Epstein-Barr virus transformation for peripheral blood lymphocyte immortalization. *AIDS Res. Hum. Retroviruses*, 10:359-369, 1994. A panel of 33 human monoclonal antibodies were produced. Linear epitopes for some of this set of MAbs were mapped using peptide ELISA. Linear epitopes were mapped in gp41, and a single epitope was mapped in p24. While multiple gp120 specific MAbs were generated, all seemed to be conformational or carbohydrate dependent, or both. PubMed ID: 7520721. [Show all entries for this paper.](#)

Sattentau1995 Q. J. Sattentau, S. Zolla-Pazner, and P. Poignard. Epitope exposure on functional, oligomeric HIV-1 gp41 molecules. *Virology*, 206:713-717, 1995. Most gp41 epitopes are masked when associated with gp120 on the cell surface. Weak binding of anti-gp41 MAbs can be enhanced by treatment with sCD4. MAb 2F5 binds to a membrane proximal epitope which binds in the presence of gp120 without sCD4. PubMed ID: 7530400. [Show all entries for this paper.](#)

Maksiutov2002 A. Z. Maksutov, A. G. Bachinskii, and S. I. Bazhan. [Searching for Local Similarities Between HIV-1 and Human Proteins. Application to Vaccines]. *Mol Biol (Mosk)*, 36(3):447-459, May-Jun 2002. Article in Russian. PubMed ID: 12068630. [Show all entries for this paper.](#)

Displaying record number 740

MAb ID 24G3

HXB2 Location gp160(525-543)

gp160 Epitope Map

Author Location gp41(526-543 BH10)

Research Contact H. Katinger, Inst. Appl. Microbiol., Vienna, Austria

Epitope AAGSTMGAASMTLTVQARQ

Epitope Alignment

Ab Type

Neutralizing no

Species (Isotype) human(IgG1κ)

Immunogen HIV-1 infection

Keywords

Notes

- 24G3: This epitope is similar to a fragment of the HLA class II histocompatibility antigen, GGSCMAALTVTLTV. [Maksiutov2002](#)
- 24G3: Human MAb generated by electrofusion of PBL from HIV-1+ volunteers with CB-F7 cells. [Buchacher1994](#)

References

Buchacher1992 A. Buchacher, R. Predl, C. Tauer, M. Purtscher, G. Gruber, R. Heider, F. Steindl, A. Trkola, A. Jungbauer, and H. Katinger. Human monoclonal antibodies against gp41 and gp120 as potential agents for passive immunization. *Vaccines*, 92:191-195, 1992. [Show all entries for this paper.](#)

Buchacher1994 A. Buchacher, R. Predl, K. Strutzenberger, W. Steinfellner, A. Trkola, M. Purtscher, G. Gruber, C. Tauer, F. Steindl, A. Jungbauer, and H. Katinger. Generation of human monoclonal antibodies against HIV-1 proteins; electrofusion and Epstein-Barr virus transformation for peripheral blood lymphocyte immortalization. *AIDS Res. Hum. Retroviruses*, 10:359-369, 1994. A panel of 33 human monoclonal antibodies were produced. Linear epitopes for some of this set of MABs were mapped using peptide ELISA. Linear epitopes were mapped in gp41, and a single epitope was mapped in p24. While multiple gp120 specific MABs were generated, all seemed to be conformational or carbohydrate dependent, or both. PubMed ID: [7520721](#). [Show all entries for this paper.](#)

Maksiutov2002 A. Z. Maksiutov, A. G. Bachinskii, and S. I. Bazhan. [Searching for Local Similarities Between HIV-1 and Human Proteins. Application to Vaccines]. *Mol Biol (Mosk)*, 36(3):447-459, May-Jun 2002. Article in Russian. PubMed ID: [12068630](#). [Show all entries for this paper.](#)

Displaying record number 741

MAB ID 1A1

HXB2 Location gp160(525-543)

[gp160 Epitope Map](#)

Author Location gp41(526-543 BH10)

Research Contact H. Katinger, Inst. Appl. Microbiol., Vienna, Austria

Epitope AAGSTMGAASMTLTVQARQ

[Epitope Alignment](#)

Ab Type

Neutralizing no

Species (Isotype) human(IgG1κ)

Immunogen HIV-1 infection

Keywords

Notes

- 1A1: This epitope is similar to a fragment of the HLA class II histocompatibility antigen, GGSCMAALTVTLTV. [Maksiutov2002](#)
- 1A1: Human MAb generated using EBV transformation of PBL from HIV-1+ volunteers. [Buchacher1994](#)

References

Buchacher1994 A. Buchacher, R. Predl, K. Strutzenberger, W. Steinfellner, A. Trkola, M. Purtscher, G. Gruber, C. Tauer, F.

Steindl, A. Jungbauer, and H. Katinger. Generation of human monoclonal antibodies against HIV-1 proteins; electrofusion and Epstein-Barr virus transformation for peripheral blood lymphocyte immortalization. *AIDS Res. Hum. Retroviruses*, 10:359-369, 1994. A panel of 33 human monoclonal antibodies were produced. Linear epitopes for some of this set of MABs were mapped using peptide ELISA. Linear epitopes were mapped in gp41, and a single epitope was mapped in p24. While multiple gp120 specific MABs were generated, all seemed to be conformational or carbohydrate dependent, or both. PubMed ID: 7520721. [Show all entries for this paper.](#)

Maksiutov2002 A. Z. Maksutov, A. G. Bachinskii, and S. I. Bazhan. [Searching for Local Similarities Between HIV-1 and Human Proteins. Application to Vaccines]. *Mol Biol (Mosk)*, 36(3):447-459, May-Jun 2002. Article in Russian. PubMed ID: 12068630. [Show all entries for this paper.](#)

Questions or comments? Contact us at immuno@lanl.gov

Operated by Los Alamos National Security, LLC, for the U.S. Department of Energy's National Nuclear Security Administration
Copyright © 2005-2006 LANS LLC All rights reserved | [Disclaimer/Privacy](#)



SCORE - View Sequence Detail(s) for Application 10829442

[Score Home Page](#) [Retrieve Application List](#) [SCORE System Overview](#) [SCORE FAQ](#) [Comments / Suggestions](#)

Enter SEQ ID
No:

Enter Application
ID No:

Here is the list of the requested sequences:

<210> SEQ ID NO 35
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Description of Artificial Sequence: primer
<400> SEQUENCE: 35
agcagcagga agcactatgg

20

[First Sequence](#)

[Next Sequence](#)

[Previous Sequence](#)

[Last Sequence](#)

[Convert To Search
Format](#)

[Go back to Table of
Contents Page](#)

[Download All
Sequences](#)

A G C A G C A A G C A C T A T G G
A A G S T M

[DATABASES](#)[SEARCH](#)[ALIGNMENTS](#)[TOOLS](#)[PUBLICATIONS](#)[GUIDES](#)[Se](#)

Translation results

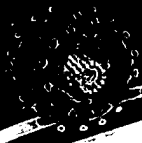
[Download](#) this translation

```
>seq1 (+1)
SSRKHYX
>seq1 (+2)
XAAGSTMX
>seq1 (+3)
XQQEALW
```

Questions or comments? Contact us at seq-info@lanl.gov

Operated by Los Alamos National Security, LLC, for the U.S. Department of Energy's National Nuclear Security Administration
Copyright © 2005-2006 LANSLC All rights reserved | [Disclaimer/Privacy](#)





HIV sequence data Development

[DATABASES](#)[SEARCH](#)[ALIGNMENTS](#)[TOOLS](#)[PUBLICATIONS](#)[GUIDES](#) [Se](#)

Translation results

[Download this translation](#)

```
>seq1
SSRKHYX
>seq1
XAAGSTMX
>seq1
XQQEALW
```

Questions or comments? Contact us at seq-info@lanl.gov

Operated by Los Alamos National Security, LLC, for the U.S. Department of Energy's National Nuclear Security Administration
Copyright © 2005-2006 LANSLC All rights reserved | [Disclaimer/Privacy](#)



U.S. DEPARTMENT OF ENERGY



NATIONAL NUCLEAR SECURITY ADMINISTRATION

infected with MVP-5180/91 (SEQ ID NO:56) were pipetted into a 100 μ l reaction mixture (0.25 mM dNTP, in each case 1 μ M primer 1 and primer 2, 10 mM Tris HCl, pH 8.3, 50 mM KCl, 1.5 MgCl₂, 0.001% gelatin, 2.5 units of Taq polymerase (Perkin Elmer)), and amplification was then carried out in accordance with the following temperature program: 1. initial denaturation: 3' 95°C, 2. amplification: 90" 94°C, 60" 56°C, 90", 72°C (30 cycles).

[062] The primers used for the PCR and for nucleotide sequencing were synthesized on a Biosearch 8750 oligonucleotide synthesizer.

Primer 1 (SEQ ID NO:35): AGC AGC AGG AAG CAC TAT GG
(coordinates from HIV-1 isolate HXB2: bases 7795-7814, corresponds to primer sk 68) (SEQ ID NO:21)

Primer 2 (SEQ ID NO:36): GAG TTT TCC AGA GCA ACC CC
(coordinates from HIV-1 isolate HXB2: bases 8003-8022, corresponds to primer env b (SEQ ID NO:20).

[063] The amplified DNA was fractionated on a 3% "Nusieve" agarose gel (from Biozyme) and the amplified fragment was then cut out and an equal volume of buffer (1 * TBE (0.09 M Tris borate, 0.002 M EDTA, pH 8.0) was added to it. After incubating the DNA/agarose mixture at 70°C for 10 minutes, and subsequently extracting with phenol, the DNA was precipitated from the aqueous phase by adding 1/10 vol of 3 M NaAc, pH 5.5, and 2 vol of ethanol and storing at -20°C for 15', and then subsequently pelleted in a centrifuge (Eppendorf) (13,000 rpm, 10', 4°C). The pelleted DNA was dried and taken up in water, and then, after photometric



US00515694A

United States Patent [19]
Luciw et al.

[11] **Patent Number:** **5,156,949**
[45] **Date of Patent:** **Oct. 20, 1992**

[54] **IMMUNOASSAYS FOR ANTIBODY TO HUMAN IMMUNODEFICIENCY VIRUS USING RECOMBINANT ANTIGENS**

8504897 11/1985 PCT Int'l Appl. .
8504903 11/1985 PCT Int'l Appl. .
8602383 4/1986 World Int. Prop. O. .

[75] **Inventors:** Paul A. Luciw, Davis; Dino Dina, San Francisco, both of Calif.
[73] **Assignee:** Chiron Corporation, Emeryville, Calif.
[21] **Appl. No.:** 138,894
[22] **Filed:** Dec. 24, 1987

OTHER PUBLICATIONS

Wain-Hobson, S. *AIDS* 3(Suppl 1): S13-S18 (1989).
Fenyo, E. M. et al. *AIDS* 3(Suppl 1):S5-S12 (1989).
Meyerhans, A. et al. *Cell* 58:901-910 (Sep. 8, 1989).
Popovic et al., *Science* 24:497-500 (May 4, 1984).
Barre-Sinoussi et al., May 20 (1983) *Science* 220:868-871.
Saxinger et al., (1983) *Laboratory Investigation* 49:371-377.
Gallo et al., (May 4, 1984) *Science* 224:497-504.
Schupbach et al., (May 4, 1984) *Science* 224:607-609.
Sarnagadharan et al., (May 4, 1984) *Science* 224:506-508.
Safai et al., (Jun. 30, 1984) *Lancet*, pp. 1438-1440.
Shaw et al. in *AIDS: Papers from Science, 1982-1985*, pp. 356-268 (R. Kulstad ed. 1986).
Looney et al., *Science* 241:357-359 (1988).
Culliton in *AIDS: Papers from Science, 1982-1985*, pp. 266-277 (R. Kulstad ed. 1986).
Gurgo et al., *Virology* 164:531-536.

(List continued on next page.)

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 773,447, Sep. 6, 1985, abandoned, which is a continuation-in-part of Ser. No. 696,534, Jan. 30, 1985, abandoned, which is a continuation-in-part of Ser. No. 667,501, Oct. 31, 1984, abandoned.
[51] **Int. Cl.⁵** G01N 33/53; C12P 21/06; C12N 15/00; C12N 1/20
[52] **U.S. Cl.** 435/5; 435/7.2; 435/69.1; 435/172.3; 435/252.33; 435/810; 435/820; 435/974; 935/60; 935/66; 935/69; 935/71
[58] **Field of Search** 435/5, 7, 68, 172.3, 435/235-239, 810, 820, 948, 69.1, 974; 935/60, 81, 66, 69, 71

References Cited

U.S. PATENT DOCUMENTS

4,520,113 5/1985 Gallo et al. .
4,708,818 11/1987 Montagnier 435/5
4,716,102 12/1987 Levy 435/5
4,725,669 2/1988 Essex et al. 530/395
4,751,180 6/1988 Cousens et al. 435/255

FOREIGN PATENT DOCUMENTS

136798 4/1985 European Pat. Off. .
138667 4/1985 European Pat. Off. .
0139216 5/1985 European Pat. Off. .
0152030 8/1985 European Pat. Off. .
165120 12/1985 European Pat. Off. .
173529 3/1986 European Pat. Off. .
178978 4/1986 European Pat. Off. .
181150 5/1986 European Pat. Off. .
185444 6/1986 European Pat. Off. .

Primary Examiner—Christine M. Nucker
Assistant Examiner—M. P. Woodward
Attorney, Agent, or Firm—Robert P. Blackburn; Barbara G. McClung; Debra A. Shetka

[57] **ABSTRACT**

Polynucleotide sequences are provided for the diagnosis of the presence of retroviral infection in a human host associated with lymphadenopathy syndrome and/or acquired immune deficiency syndrome, for expression of polypeptides and use of the polypeptides to prepare antibodies, where both the polypeptides and antibodies may be employed as diagnostic reagents or in therapy, e.g., vaccines and passive immunization. The sequences provide detection of the viral infectious agents associated with the indicated syndromes and can be used for expression of antigenic polypeptides.

22 Claims, 59 Drawing Sheets

